

Amendments to the Claims:

1. (currently amended) A radio communication system having a multiple-antenna transmitter that selectably transmits data at least from a first transmit antenna transducer and at least a second transmit antenna transducer for communication to a receiver, an apparatus comprising:

an encoder which encodes the data, the data encoded comprises a systematic part and a non-systematic part;

a determiner at least adapted to receive indications of channel conditions of each channel upon which data is transmitted by each of the first and at least second transmit antenna transducers, respectively, said determiner for determining at least relative channel qualities of each of the channels; and

a data assignor coupled to said determiner to receive indications of determinations made thereat, said assignor for assigning the systematic part of the data encoded by the encoder to at least one of the first and at least second transmit antenna transducers that exhibits better channel qualities;

wherein the indications of the channel conditions which said determiner is adapted to receive comprise indications of aggregated energy levels of the data detected at the receiver.

2. (original) The apparatus of claim 1 wherein the radio communication system comprises a multiple-input, multiple-output communication system, wherein the receiver comprises a first receive antenna transducer and at least a second receive antenna transducer, and wherein said determiner is at least adapted to receive indications of channel conditions on each channel formed between each of the first and at least second transmit antenna transducers and each of the first and at least second receive antenna transducers.

3. (canceled)

4. (original) The apparatus of claim 1 wherein the indications of the channel conditions to which said determiner is adapted to receive are provided to the transmitter by the receiver.

5. (original) The apparatus of claim 1 wherein the encoder at which the data is encoded to include the systematic part comprises a turbo encoder.

6. (original) The apparatus of claim 1 wherein the non-systematic part of the data encoded by the encoder comprises a parity part and wherein said data assignor further assigns the parity part of the data encoded by the encoder to at least an other of the at least one of the first and at least second transmit antenna transducers.

7. (previously presented) The apparatus of claim 6 wherein the other of the at least one of the first and at least second transmit antenna transducers to which said data assignor assigns the parity part of the data encoded by the data encoder exhibits poorer channel qualities.

8. (previously presented) The apparatus of claim 7 wherein said data assignor assigns the systematic part to a selected number of the first and at least second transmit antenna transducers that exhibit the better channel qualities and assigns the parity part to at least one remaining transmit antenna transducer.

9. (previously presented) The apparatus of claim 1 wherein the radio communication system comprises a cellular communication system operable pursuant to a cdma 2000 operating specification and that provides for 1xEV-DV data communications and wherein the data encoded by the data encoder comprises 1xEV-DV data, the data assigned by said data assignor and transmitted from the first and at least second antenna transducers pursuant to effectuation of a 1xEV-DV data communication service.

10. (original) The apparatus of claim 1 wherein the indications of the channel conditions to which said determiner is coupled to receive comprise antenna index values.

11. (original) In the radio communication system of claim 1 wherein said determiner and said data assignor are embodied at the transmitter, a further improvement of apparatus for the receiver, also for facilitating transmission of the data to the receiver, said apparatus comprising:

a channel condition detector for detecting the channel conditions of each of the channels upon which the data is transmitted; and

a channel condition message generator, coupled to said channel condition detector, said channel condition message generator for generating channel condition message for communication by the receiver to the transmitter of detections made by said channel condition detector.

12. (original) The apparatus of claim 11 wherein the channel conditions detected by said channel condition detector comprise indications of aggregated energy levels detected at the receiver.

13. (original) The apparatus of claim 11 wherein the channel conditions detected by said channel condition detector comprise indications of antenna index values.

14. (original) The apparatus of claim 11 wherein the transmitter at which said determiner and said data assignor are embodied comprise a base transceiver station operable in a cellular radio communication system and wherein the receiver at which said channel condition detector and said channel condition message generator are embodied at a mobile station operable in the cellular radio communication system.

15. (currently amended) A method of communicating in a radio communication system having a multiple-antenna transmitter that selectably transmits data at least from a first transmit antenna transducer and at least a second transmit antenna transducer for communication to a receiver, the method comprising:

encoding the data, the encoded data comprises a systematic part and a nonsystematic part;

detecting channel conditions of each channel upon which the data is transmitted;
determining at least relative channel qualities of each channel upon which data is
transmitted by each of the first and at least second transmit antenna transducers, responsive to
detections made during the detecting; and
assigning the systematic part of the encoded data to at least one of the first and at least
second transmit antenna transducers that exhibits better channel qualities;
wherein the detections comprise aggregate energy levels of the data received at the
receiver.

16. (canceled)

17. (currently amended) The method of claim [[16]] 15 wherein said operations of
determining and assigning are performed at the transmitter and wherein said operation of
detecting is performed at the receiver.

18. (original) The method of claim 17 further comprising the operation of sending
values representative of the channel conditions to the transmitter.

19. (original) The method of claim 18 further comprising the operation, prior to said
operation of sending, of forming a message containing the values representative of the channel
conditions and wherein said operation of sending comprises sending the message formed during
said operation of forming.

20. (canceled)

21. (new) The apparatus of claim 1, wherein the aggregated energy levels comprise a
total channel energy of the data communicated upon each of the channels to the receiver.

22. (new) The method of claim 15, wherein the aggregate energy levels comprise a total
energy level of the data communicated upon each of the channels to the receiver.

23. (new) The apparatus of claim 10, wherein the antenna index values comprise data identifying a best channel quality of a channel between a respective one of one or more transmit and receive antennas pairs.

24. (new) The apparatus of claim 10, wherein the antenna index values comprise data which ranks, from highest to lowest, the channel quality of each of the respective channels between one or more transmit and receive antenna pairs.

25. (new) The method of claim 15, wherein detecting channel conditions further comprises detecting antenna index values.

26. (new) The method of claim 25, wherein the antenna index values comprise data identifying a best channel quality of a channel between a respective one of one or more transmit and receive antennas pairs.

27. (new) The method of claim 25, wherein the antenna index values comprise data which ranks, from highest to lowest, the channel quality of each of the respective channels between one or more transmit and receive antenna pairs.